

The Examiner has objected to claims 15-18 as being dependent on non-elected subject matter and indicates that the objection can be overcome by changing the dependency to elected subject matter only. Applicants herein amend claims 15-18 accordingly. Withdrawal of the objection is requested.

Relying on 35 U.S.C. §112, second paragraph, the Office has rejected the subject matter of claims 15-18 for essentially the same reasons stated in the aforementioned objection. Due to Applicants' amendments herein of claims 15-18, Applicants respectfully request reconsideration and withdrawal of the rejection.

Relying on 35 U.S.C. §102(b), the Examiner has rejected the subject matter of claims 1-3, 5 and 8 as being anticipated by Booth. Applicants respectfully traverse the rejection and request reconsideration.

Applicants respectfully submit that it is important to note that, historically, the Office and the Federal Circuit has required that for a §102 anticipation, a single reference must teach (i.e., identically describe) each and every element of the rejected claim. The Office has steadfastly and properly maintained that view.

The Booth reference fails this test. The cited reference teaches that NaOH was added until pH 10-11 was reached, namely the reaction was carried out at this specific range. Please note that only triflate salt is described as being used in the reference.

For example, the present invention was carried out at pH 13 or more since the process involved the use of 1-10 moles of the basic compound (sodium hydroxide or potassium hydroxide) per mole of the compound represented by formula (II). After the reaction, the reaction solution pH was then adjusted to the isoelectric point or to 9-13 to precipitate crystal. So the present invention is different than the disclosure of the Booth reference, even if the pH

range of 10-11 mentioned in the reference happens be inclusive in the of the pH range of 9-13 for the present invention's post reaction adjustment.

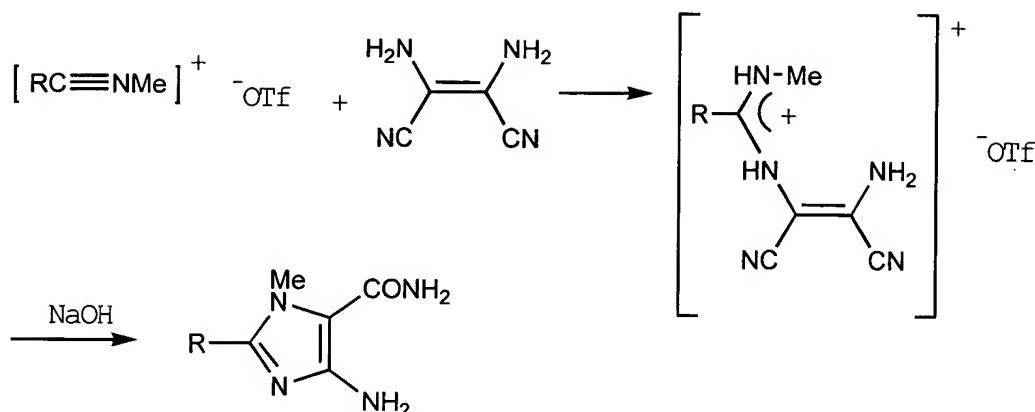
Accordingly, each and every element of Applicants' claims have not been taught in that single reference. In other words, the rejected claims do not read literally on any single item of prior art because the cited reference does not teach, disclose or suggest the present invention as claimed. Accordingly, Applicants respectfully submit that claims 1-3 and 5 have not been anticipated by the Booth reference under 35 U.S.C. §102(b), and respectfully request that such rejection be withdrawn.

Relying on 35 U.S.C. §103(a), the Examiner has rejected the subject matter of claims 1-3 and 15-18 as obvious over the above-mentioned Booth reference. Applicants respectfully traverse the rejection and request reconsideration.

It is evident that Applicants' invention is decidedly different from the teachings of the cited reference. Applicants herein incorporate by reference the above remarks related to the 102(b) rejection.

Applicants are aware of the Booth reference and make note of it in Applicants' specification, page 3, lines 5-end of page, and is reprinted as follows:

Also, B. L. Booth et al. (J. Chem. Soc. Perkin Trans., I:1521, 1987) reported the process for synthesizing 1,2-substituted imidazole as shown by the following formula.



However, it is not suitable for synthesis of N-nonsubstituents due to the use of a special nitrilium salt, yet it has been problematic in that a yield from cyclization is low and the objective was not obtained with a sufficient yield.

Moreover, it has also been problematic in that in the case of conducting a reaction of alkylation of 1H-4(5)-aminoimidazole-5(4)-carboxamide, both 1- and 3-positions are alkylated and thus its selectivity of position is low.

Although the process is arguably similar to that of the present invention, the yield of the Booth process is very low (only 26%). See page 1524, 4th paragraph in left-hand column.
Applicants consider that this caused by the reaction conditions, namely pH is too low during the reaction.

The present invention is established based on the fact that a raw material of the formula (II) can be easily obtained at short steps and as previously mentioned, a good yield of the compound of formula (I) can be obtained at a simple after treatment. Applicants submit that the present inventive process is unobvious.

Accordingly, Applicants submit that the Examiner has not established a prima facie case of obviousness.

Clearly, in the absence of any suggestion or in view of the absence of any teaching whatsoever of how one skilled in the art would attempt to use the process of the Booth reference

to arrive at the present inventive process, one skilled in the art would certainly not find ample motivation to use the Booth reference to arrive at the present invention.

The Office has used the claimed invention as a reference against itself as if it had preceded itself in time. Legal authority invalidates such an analytical or reverse engineering approach to patent examination. It is not Applicants' burden to refute the Office's position that it would have been obvious to one of ordinary skill in this art at the time this invention was made to arrive at the present invention in view of the Booth reference. It is the burden of the Office to show some teaching or suggestion in the reference to support this allegation. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d at 1051, 5 U.S.P.Q.2d at 1438-39 (Fed. Cir. 1988).

A finding by the Office that a claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made based merely upon finding similar elements in a prior art reference would be "contrary to statute and would defeat the congressional purpose in enacting Title 35." Panduit Corp. v. Dennison Mfg. Co., 1 U.S.P.Q.2d 1593 at 1605 (Fed. Cir. 1987). Accordingly, Applicants respectfully submit that claims 1-3, 5 and 15-18 are patentable over the Booth reference under 35 U.S.C. §103(a). Withdrawal of the rejection is respectfully requested.

CONCLUSION

As the Federal Circuit observed in Orthopedic Equipment Co. v. United States, 702 F.2d 1005, 217 U.S.P.Q. 193 (Fed. Cir. 1983):

The question of nonobviousness is a simple one to ask, but difficult to answer ... The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of nonobviousness ...

Even though the initial claims in this important patent application were drawn to a new, useful and nonobvious invention, they have now been amended to increase their specificity of language.

A Notice of Allowance is earnestly solicited.

If the Office is not fully persuaded as to the merits of Applicant's position, or if an Examiner's Amendment would place the pending claims in condition for allowance, a telephone call to the undersigned at (727) 538-3800 would be appreciated.

Very respectfully,

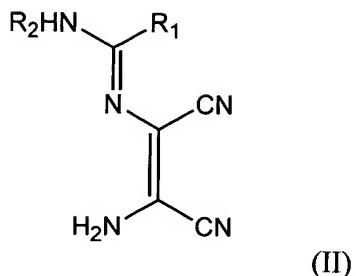
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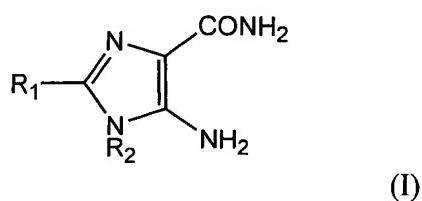
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1. (Amended) A process for the preparation characterized in that a compound represented by formula (II):

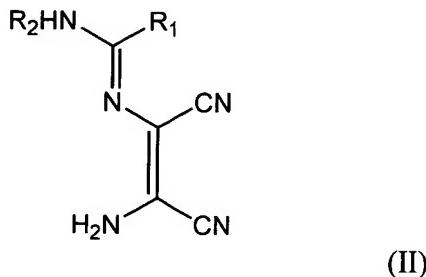


[(wherein R₁ and R₂ each independently represent a hydrogen atom, an alkyl group of C₁ to C₁₀ which may have substituents, a hydrocarbon group of C₃ to C₁₄ having alicyclic skeletons, an alkynyl group which may have substituents, an aryl group which may have substituents, an aralkyl group which may have substituents, a heterocyclic group which may have substituents, a heterocyclic alkyl group which may have substituents, an N-unsubstituted or substituted carbamoyl group, or an alkoxy carbonyl group]) and/or [a] an inorganic salt thereof are cyclized and hydrolyzed in an aqueous basic solution involving 1-10 moles of a basic compound per 1 mole of the compound represented by formula (II), in a process for preparing a compound represented by formula (I):

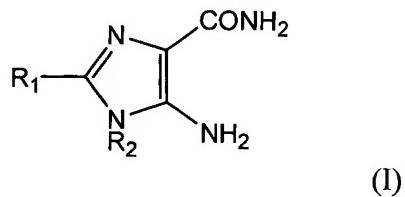


[(wherein R₁ and R₂ are the same as defined above)].

2. (Amended) A process for the preparation characterized in that a compound represented by formula (II):

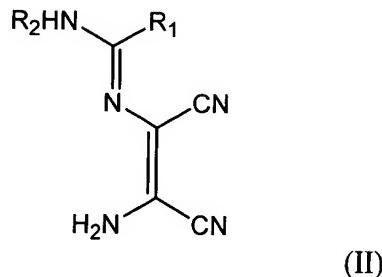


[wherein R₁ represents a hydrogen atom, an alkyl group of C₁ to C₁₀ which may have substituents, a hydrocarbon group of C₃ to C₁₄ having alicyclic skeletons, an alkynyl group which may have substituents, an aryl group which may have substituents, an aralkyl group which may have substituents, a heterocyclic group which may have substituents, a heterocyclic alkyl group which may have substituents, an N-unsubstituted or substituted carbamoyl group, or an alkoxy carbonyl group; and R₂ represents a hydrogen atom] and/or [a] in inorganic salt thereof are cyclized/ hydrolyzed in an aqueous basic solution involving 1-10 moles of a basic compound per 1 mole of the compound represented by formula (II), followed by adjusting the pH to the isoelectric point to precipitate crystal in a process for preparing a compound represented by formula (I):

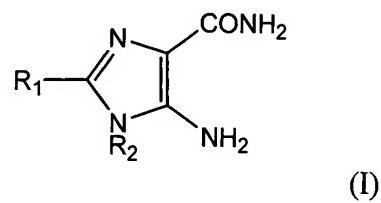


[wherein R₁ and R₂ represent the same as defined above].

3. (Amended) A process for the preparation characterized in that a compound represented by formula (II):



[wherein R₁ represents a hydrogen atom, an alkyl group of C₁ to C₁₀ which may have substituents, a hydrocarbon group of C₃ to C₁₄ having alicyclic skeletons, an alkynyl group which may have substituents, an aryl group which may have substituents, an aralkyl group which may have substituents, a heterocyclic group which may have substituents, a heterocyclic alkyl group which may have substituents, an N-unsubstituted or substituted carbamoyl group, or an alkoxy carbonyl group; and R₂ represents a hydrogen atom] and/or [a] an inorganic salt thereof are cyclized/ hydrolyzed in an aqueous basic solution involving 1-10 moles of a basic compound per 1 mole of the compound represented by formula (II), followed by adjusting the pH to 9 to 13 to precipitate crystal in a process for preparing a compound represented by formula (I):



[wherein R₁ and R₂ represent the same as defined above].

15. (Amended) The process for the preparation according to any one of Claims 1 through 3, [6, 7, 9, 11 or 14] wherein R₁ in formulae (I) through (II) [(VI)] is

a hydrogen atom,

an unsubstituted alkyl group of C₁ to C₁₀ having straight or branched chains,

an alkyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, acyloxy, carbamoyl, oxy, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl, amino groups,

a hydrocarbon group of C₃ to C₁₄ having alicyclic skeletons,

an unsubstituted alkenyl group of C₁ to C₁₀ having straight or branched chains,

an alkenyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, phenyl, substituted phenyl groups,

an unsubstituted alkynyl group of C₁ to C₁₀ having straight or branched chains,

an alkynyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, phenyl, substituted phenyl groups,

a phenyl group,

a phenyl group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted aralkyl group having straight or branched chains,

an aralkyl group having straight or branched chains substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted heterocyclic group,

a heterocyclic group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,
an unsubstituted heterocyclic alkyl group having straight or branched chains,
a heterocyclic alkyl group having straight or branched chains substituted with halogen atoms,
alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,
an N-unsubstituted or substituted carbamoyl group,
or an alkoxycarbonyl group

16. (Amended) The process for the preparation according to [any of] Claim 1 [or
Claim 14] wherein R₂ in formulae **(I)**[, **(II)** and **(VI)**] and **(II)** is
an unsubstituted alkyl group of C₁ to C₁₀ having straight or branched chains,
an alkyl group having straight or branched chains substituted with halogen atoms, hydroxyl,
alkoxy, acyloxy, carbamoyloxy, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl,
amino groups,
a hydrocarbon group of C₃ to C₁₄ having alicyclic skeletons,
an unsubstituted alkenyl group of C₁ to C₁₀ having straight or branched chains,
an alkenyl group of C₁ to C₁₀ having straight or branched chains substituted with halogen atoms,
hydroxyl, alkoxy, phenyl, substituted phenyl groups,
an unsubstituted alkynyl group of C₁ to C₁₀ having straight or branched chains,
an alkynyl group having straight or branched chains substituted with halogen atoms, hydroxyl,
alkoxy, phenyl, substituted phenyl groups,
a phenyl group

a phenyl group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted aralkyl group having straight or branched chains,

an aralkyl group having straight or branched chains substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted heterocyclic group,

a heterocyclic group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted heterocyclic alkyl group having straight or branched chains,

a heterocyclic alkyl group having straight or branched chains substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an N-unsubstituted or substituted carbamoyl group,

or an alkoxycarbonyl group.

17. (Amended) The process for preparation according to any one of Claims 1 through 3, [6, 7, 9, 11, or 14] wherein R₁ in formulae (I) through (II) [(VI)] is

a hydrogen atom,

an unsubstituted alkyl group of C₁ to C₁₀ having straight or branched chains,

an alkyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, acyloxy, carbamoyloxy, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl, amino groups.

18. (Amended) The process for the preparation according to any one of Claims 1 through 3, [6, 7, 9, 11 or 14] wherein R₁ in general formulae (I) through (II) [(VI)] is an unsubstituted alkyl group of C₁ to C₁₀ having straight or branched chains.